

AD-A104 201

ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
19315B MLRS, MISSILE NUMBERS V-13-003, V-15-002, ROUND NUMBERS --ETC(U)
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Aug. 81
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METEOROLOGICAL DATA REPORT
19315B MLRS
Missile Numbers V-13-003, V-15-002
Round Numbers V-179/AT-7, V-180/AT-8
3 Aug 1981

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568



ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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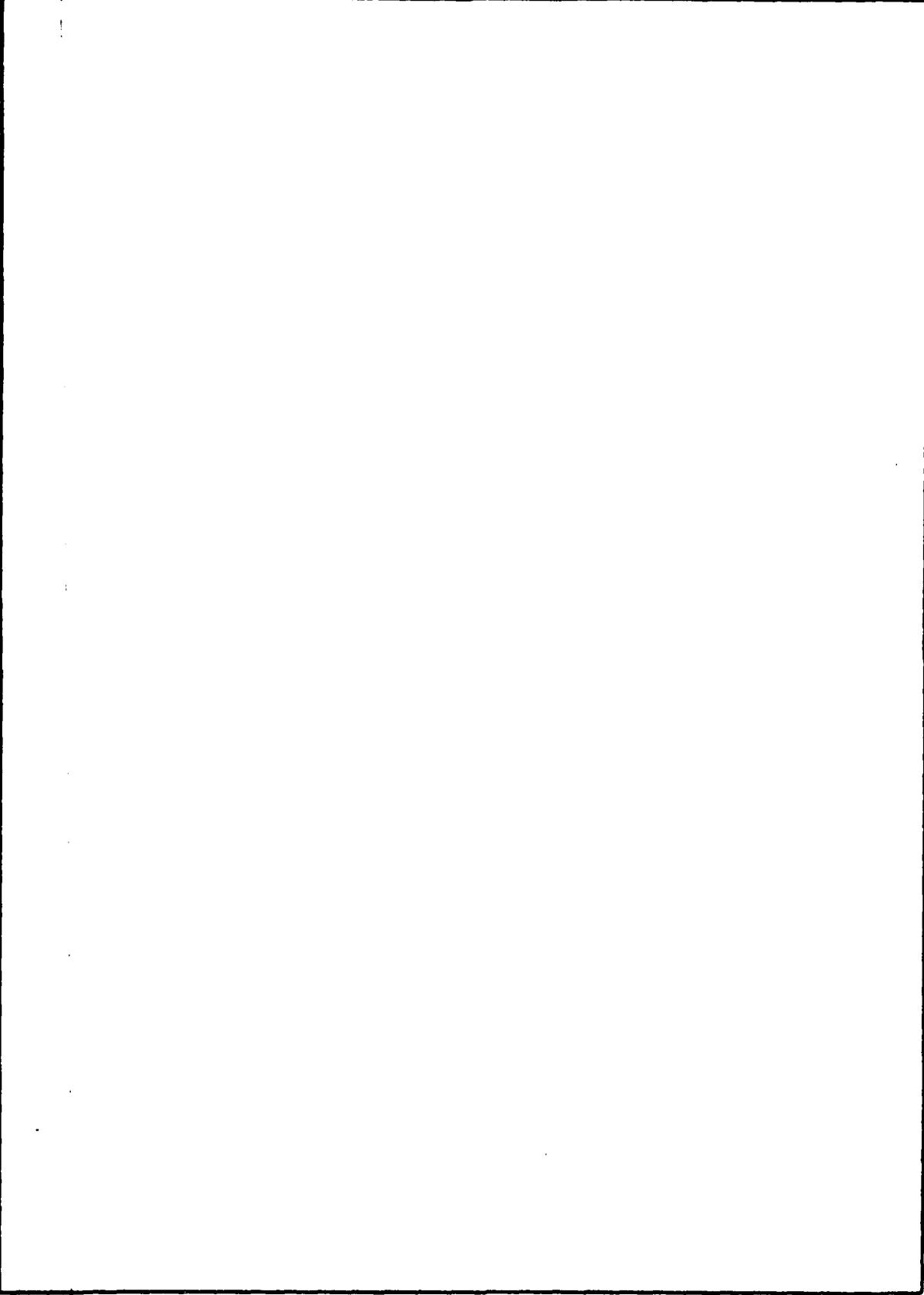
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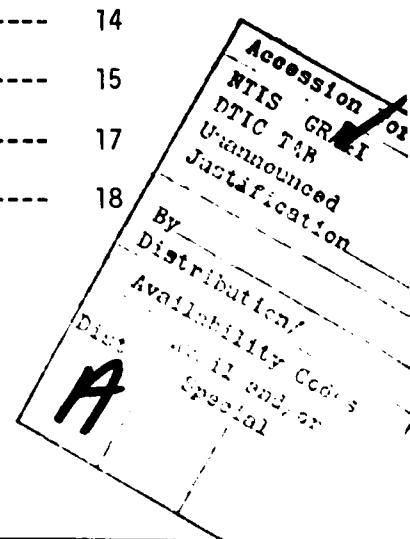
REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1201	2. GOVT ACCESSION NO. <i>AD-A104 201</i>	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19315B MLRS, Missile Numbers V-13-003, V-15-002 Round Numbers V-179/AT-7, V-180/AT-8,	5. TYPE OF REPORT & PERIOD COVERED	
7. AUTHOR(s) <i>White Sands Meteorological Team</i>	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS <i>US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002</i>	8. CONTRACT OR GRANT NUMBER(s) <i>DA TASK/1F665702D127/02</i>	
11. CONTROLLING OFFICE NAME AND ADDRESS <i>US Army Electronics Research & Development Cmd Adelphi, MD 20783</i>	12. REPORT DATE <i>Aug 81</i>	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) <i>US Army Electronics Research & Development Cmd Adelphi, MD 20783</i>	13. NUMBER OF PAGES <i>33</i>	
16. DISTRIBUTION STATEMENT (of this Report) <i>Approved for public release; distribution unlimited.</i>	15. SECURITY CLASS. (of this report) <i>UNCLASSIFIED</i>	
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) <i>Approved for public release; distribution unlimited.</i>		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19315B MLRS, Missile No. V-13-003, and V-15-002, Round No. V-179/AT-7, and V-180/AT-8 presented in tabular form.		

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INTRODUCTION

19315B MLRS, Missile Numbers V-13-003 and V-15-002, Round Numbers V-179/AT-7 and V-180/AT-8, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1441:52 and 1536:16 MDT, 03 Aug 1981. The scheduled launch times were 1430 and 1530 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations.

a. Surface:

(1) Standard surface observations to include pressure, temperature, ($^{\circ}$ C), relative humidity, dew point ($^{\circ}$ C), density (gm/m^3), wind speed and direction, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air:

(1) Low level wind data were obtained from Pilot-Balloon observations at:

SITE AND ALTITUDE

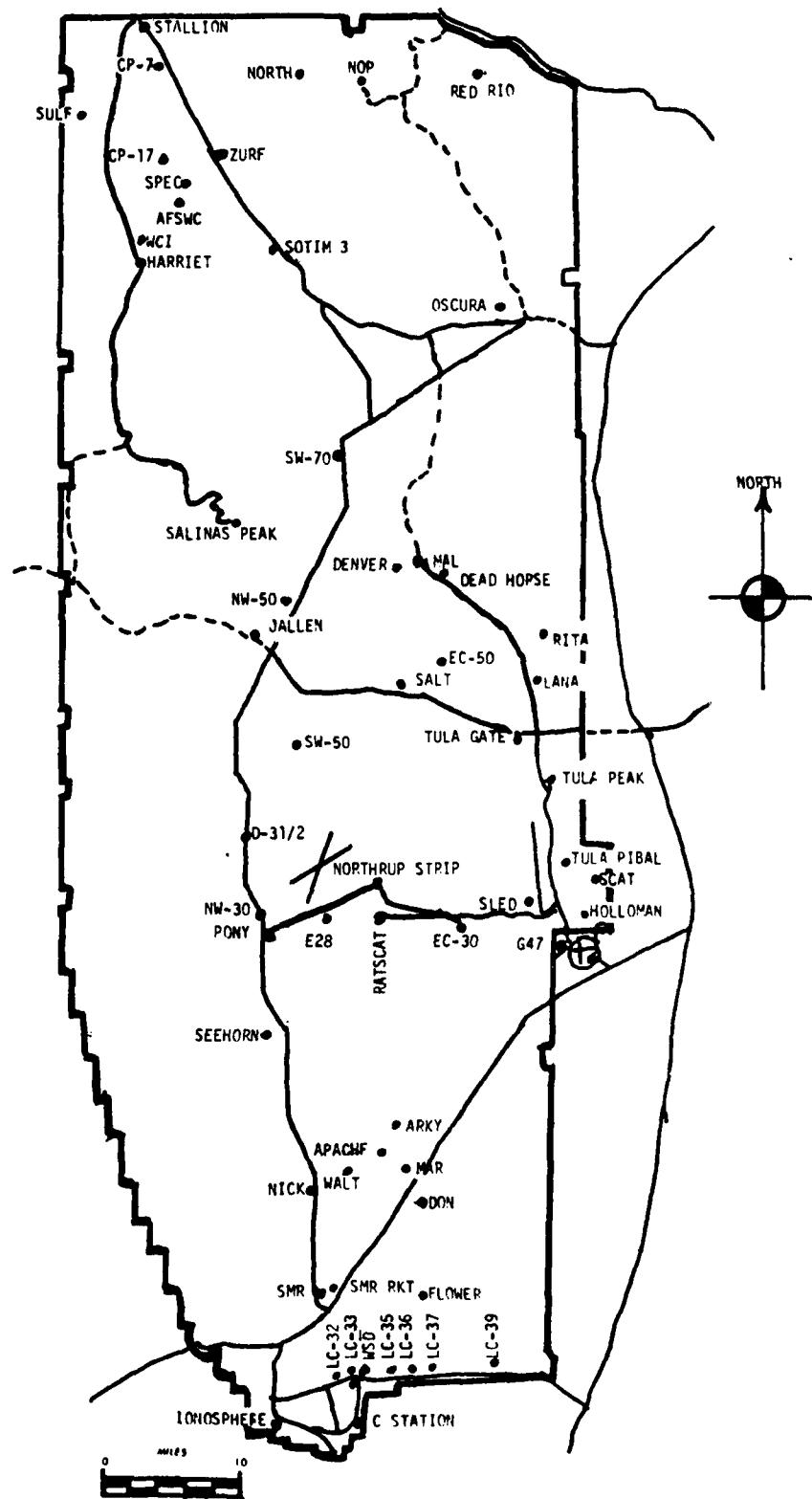
LC-33	2 KM
SMR	2 KM
SMR	2 KM

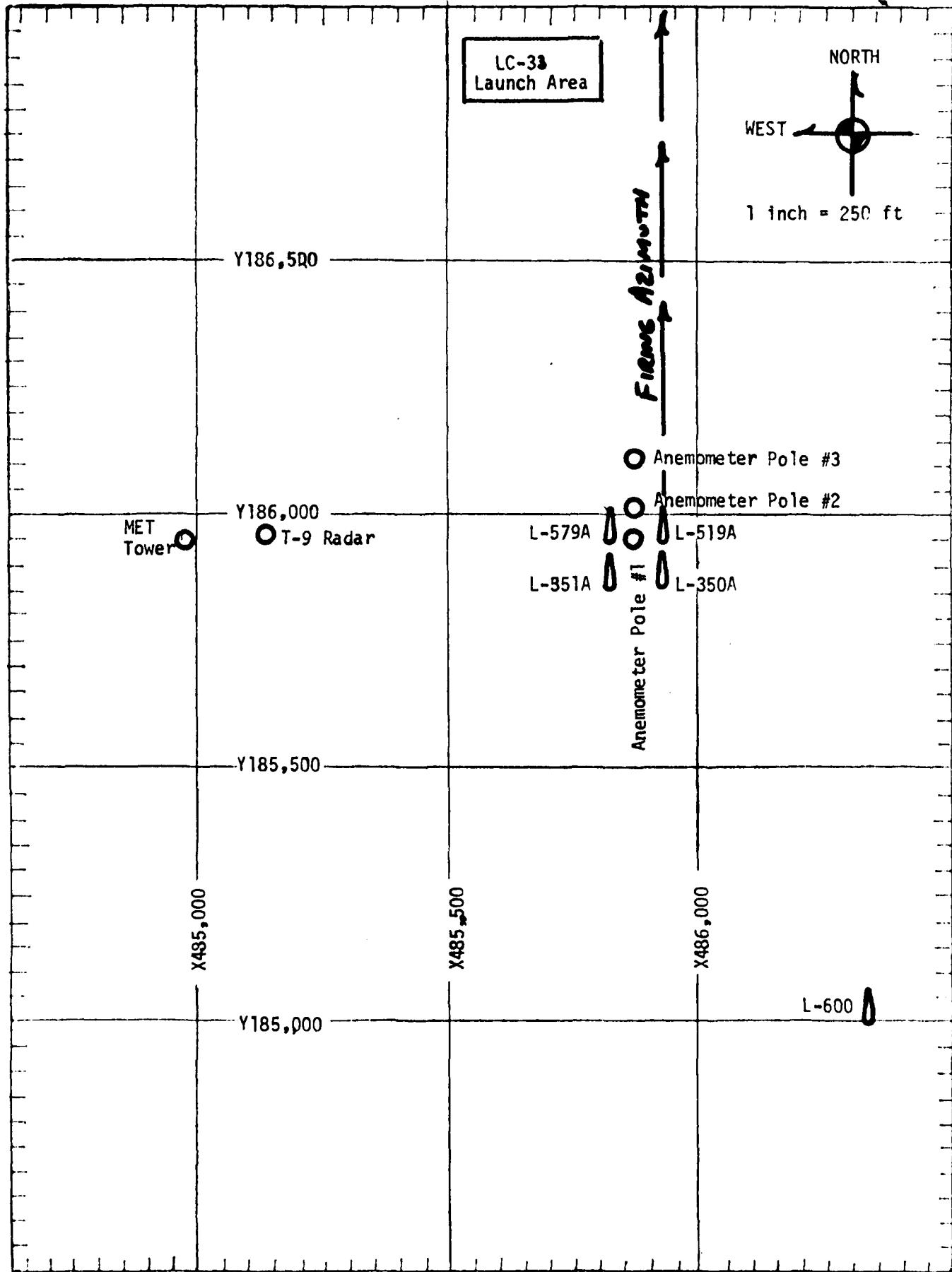
(2) Air structure data (rawinsonde) were collected at the following Met Sites:

SITE AND TIME

WSD	1130 MDT
LC-37	1230 MDT
WSD	1330 MDT
LC-37	1430 MDT
WSD	1530 MDT

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

TABLE 1

DATE 03 MONTH Aug YEAR 1981

STATION

LC-33

$X = 485,135.76 \quad Y = 185,919.24 \quad H = 3,988.60$

TIME H M	PRESSURE mb	TEMPERATURE °F °C	DEN. POINT °F °C	RELATIVE HUMIDITY %	DENSITY gm/m ³	WIND DIRECTION deg Tn	CHARACTER kts	VISIBIL- ITY
1443	876.7	33.8	17.8	39	984	120	.05	30
1537	876.3	28.9	18.0	52	999	245	12	30

OBSTRUCTIONS TO VISIBILITY	CLOUDS			REMARKS		
	1st LAYER AMT TYPE HGT	2nd LAYER AMT TYPE HGT	3rd LAYER AMT TYPE HGT			
3	CU 6,000 1 CI 25,000					
5	CB 6,000 1 AC 12,000	1	CI 25,000			

PSYCHROMETRIC COMPUTATION

TIME:	MDT	1443	1537
DRY BULB TEMP.		33.8	28.9
WET BULB TEMP.		22.3	21.1
WET BULB DEPR.		11.5	07.8
DEW POINT		17.8	18.0
RELATIVE HUMID.	39	52	

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS
1443 MDT

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	073	03	T-30	075	02	T-30	086	04
T-20	070	03	T-20	078	02	T-20	092	01
T-10	069	03	T-10	080	01	T-10	055	02
T0.0	050	02	T0.0	C A L M		T0.0	057	03
T+10	049	02	T+10	C A L M		T+10	085	07

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	125	05	T-30	120	04
T-20	117	05	T-20	103	06
T-10	115	04	T-10	100	07
T0.0	105	06	T0.0	105	06
T+10	090	07	T+10	104	07

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T-30	117	05	T-30	091	06
T-20	104	06	T-20	078	07
T-10	097	07	T-10	075	05
T0.0	096	06	T0.0	081	07
T+10	098	08	T+10	095	06

TABLE 4 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS
1537 MDT

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T ₋₃₀	M I S G	17	T ₋₃₀	259	13	T ₋₃₀	270	13
T ₋₂₀	M I S G	15	T ₋₂₀	248	10	T ₋₂₀	260	14
T ₋₁₀	M I S G	15	T ₋₁₀	251	14	T ₋₁₀	256	17
T ₀	M I S G	13	T ₀	244	17	T ₀	252	12
T ₊₁₀	M I S G	17	T ₊₁₀	242	13	T ₊₁₀	254	19

TABLE 5 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T ₋₃₀	252	13	T ₋₃₀	251	18
T ₋₂₀	242	16	T ₋₂₀	252	16
T ₋₁₀	251	13	T ₋₁₀	256	17
T ₀	245	12	T ₀	252	19
T ₊₁₀	265	13	T ₊₁₀	252	16

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
T ₋₃₀	242	18	T ₋₃₀	244	17
T ₋₂₀	241	20	T ₋₂₀	243	16
T ₋₁₀	240	20	T ₋₁₀	246	17
T ₀	239	19	T ₀	244	18
T ₊₁₀	236	18	T ₊₁₀	247	17

TABLE 6

T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 03 Aug 81

SITE: LC-33
 TIME: 1443 MDT
 WSTM COORDINATES:
 X= 484,837.34
 Y= 184,124.44
 H= 3,975.60

SITE: SMR
 TIME: 1443 MDT
 WSTM COORDINATES:
 X= 472,257.00
 Y= 214,426.00
 H= 3,999.00

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	080	04	SURFACE	090	02
150	072	08	150	041	04
210	078	10	210	011	02
270	092	10	270	209	02
330	110	09	330	343	02
390	112	08	390	011	01
500	106	06	500	053	02
650	100	04	650	132	03
800	117	01	800	027	04
950	329	01	950	022	07
1150	010	02	1150	007	08
1350	060	05	1350	008	08
1550	020	04	1550	008	08
1750	030	07	1750	007	11
2000	036	10	2000	005	09

Data obtained from Single Theodolite
Tracked Pilot-Balloon Observation.

Data obtained from T-9 Radar Tracked
Pilot-Balloon Observation.

TABLE 7

T-TIME PILOT-BALLOON MEASURED WIND DATA
 DATE 03 Aug 81

SITE: SMR
 TIME: 1537 MDT
 WSTM COORDINATES:
 X= 472,257.00
 Y= 214,426.00
 H= 3,999.00

SITE:
 TIME:
 WCTM COORDINATES:
 X=
 Y=
 H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS	LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	260	08	SURFACE		
150	232	11	150		
210	207	21	210		
270	204	18	270		
330	206	18	330		
390	202	20	390		
500	204	16	500		
650	226	12	650		
800	206	11	800		
950	185	11	950		
1150	029	07	1150		
1350	074	12	1350		
1550	047	08	1550		
1750	040	06	1750		
2000	017	08	2000		

TABLE 8

AIMING AND T-TIME COMPUTER MET MESSAGES

WSD 1130 MDT	LC-37 1230 MDT	WSD 1330 MDT	LC-37 1430 MDT
METCM1324064	METCM1324063	METCM1324064	METCM1324063
031750122879	031850124876	031950122878	032050124874
00231004 30570879	00000000 30710876	00124007 30910878	00178004 30840874
01292010 30420869	01173004 30530866	01201013 30770868	01105006 30700865
02350007 30080845	02248003 30150842	02127006 30440844	02128001 30400841
03478006 29730807	03323005 29780804	03158007 29940807	03484001 30010804
04606008 29370762	04578008 29390759	04508006 29420762	04549004 29530759
05001008 29030718	05622008 29110716	05600009 29020719	05566006 29070716
06630010 28740677	06015008 28820675	06022008 28670677	06625007 28690675
07603007 28370638	07638006 28470636	07003007 28250638	07632008 28300636
08013007 27970601	08004006 28050599	08635008 27900600	08628010 27890598
09633008 27560565	09026010 27640564	09020012 27490565	09634014 27540563
10623007 27220531	10639010 27250530	10610007 27100530	10611011 27140529
11634008 26890498	11621007 26920497	11611008 26710498	11586012 26820496
12043006 26460453	12625008 26530452	12611006 26370452	12606008 26510451

WSD 1530 MDT
 METCM1324064
 032150122876
 00444010 30700876
 01454020 30530866
 02421011 30120842
 03274004 29920805
 04200006 29520760
 05147003 28990717
 06042013 28540676
 07021013 28130636
 08009014 27810599
 09006013 27500563
 10001012 27120529
 11005016 26740497
 12083006 26430452

STATION ALTITUDE 3489.00 FEET MSL
3 AUG. 11 AM HRS EDT
AS ELEVATION .0. 301

SIGNIFICANT LEVEL DATA
215002Z AUG
WHITE SANDS
TABLE 9

WEATHER COORDINATES
32°40'43" LAT DEG
106°37'03" LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE OF GREEKS CENTIGRADE	H.L.HUM. PERCENT
678.5	3989.0	30.2	43.0
850.0	4951.7	26.0	10.2
793.2	6937.5	20.7	15.2
703.2	10325.8	14.5	11.2
660.8	12047.1	11.5	8.0
635.6	13189.7	8.7	5.0
599.4	14745.1	5.1	-1.8
556.4	16684.3	1.1	-1.5
515.0	18713.1	-3.2	-6.1
503.6	19294.7	-5.0	-7.1
500.0	19480.5	-5.0	-6.1
475.0	20803.9	-6.9	-10.1
464.4	21382.8	-7.9	-15.3
444.4	22504.9	-10.1	-16.0
429.4	23373.9	-11.5	-23.0
414.6	24258.5	-11.7	-25.7
400.0	25158.5	-14.0	-24.2
393.0	25598.9	-15.2	-20.4
371.6	26985.3	-17.9	-22.7
358.4	27873.9	-19.1	-20.5
338.8	29244.5	-21.9	-22.9
307.6	31557.0	-28.1	-30.3
300.0	32147.6	-28.6	-39.1

STATION ALTITUDE 3989.0 FEET MSL
3 AUG. 81 1130 HRS MDT
ASCENSION 1.0. 301

UPPER AIR DATA
215000Z,01
WHITE SANDS

GEODELLIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

1.000249

TABLE 10

GEOMETRIC PRESSURE ALTIMETER ASL FEET	TEMPERATURE AIR MILLIBARS	DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA INDEX OF REFRACTION
3989.0	870.5	30.2	16.2	43.0	1000.6	681.2	4.1
4000.0	870.2	30.2	16.2	43.0	1000.6	681.2	4.1
4500.0	860.3	28.0	14.6	44.1	991.4	678.5	3.3
5000.0	840.6	25.9	13.1	45.2	981.9	675.9	3.6
5500.0	830.9	24.5	12.7	47.8	969.4	674.4	4.8
6000.0	819.5	23.2	12.3	50.3	957.0	672.9	4.8
6500.0	805.4	21.9	11.8	52.8	944.8	671.3	5.3
7000.0	791.4	20.6	11.2	55.0	932.6	669.6	6.5
7500.0	771.5	19.7	10.3	54.7	919.3	668.7	7.0
8000.0	760.8	18.8	9.4	54.4	906.2	667.6	7.7
8500.0	750.3	17.8	8.4	54.1	893.3	666.4	344.6
9000.0	731.1	16.9	7.5	53.8	880.5	665.3	354.4
9500.0	724.1	16.0	6.6	53.5	868.0	664.2	358.9
10000.0	711.4	15.1	5.7	53.2	855.6	663.11	1.7
10500.0	696.8	14.2	5.1	54.2	842.2	662.0	359.7
11000.0	680.3	13.3	5.2	57.7	830.5	661.0	356.4
11500.0	674.0	12.5	5.2	61.2	818.0	660.0	348.1
12000.0	661.9	11.6	5.2	64.7	805.6	659.0	341.7
12500.0	650.0	10.4	3.7	63.0	794.9	657.5	340.5
13000.0	630.2	9.2	2.0	60.8	784.2	656.0	342.0
13500.0	620.6	8.0	0.8	60.2	773.4	654.5	346.7
14000.0	613.1	6.8	-3	60.5	762.5	653.1	356.5
14500.0	605.8	5.7	-1.3	60.8	751.8	651.6	4.1
15000.0	592.7	4.4	-1.6	64.7	741.2	650.2	4.7
15500.0	581.7	3.2	-1.4	71.9	730.4	649.7	1.9
16000.0	570.9	1.9	-1.4	79.1	720.5	647.4	357.6
16500.0	560.3	0.6	-1.4	86.3	710.4	645.7	353.1
17000.0	549.7	-0.4	-2.5	85.9	699.7	644.5	355.0
17500.0	533.4	-1.2	-4.1	61.0	680.0	643.4	355.2
18000.0	529.2	-2.0	-5.7	76.0	676.0	642.4	355.6
18500.0	519.2	-2.9	-7.3	71.1	667.4	641.3	350.1
19000.0	509.3	-4.1	-7.5	76.9	657.0	639.9	357.1
19500.0	499.6	-5.0	-8.1	79.0	647.5	636.7	356.0
20000.0	490.6	-5.7	-8.9	78.6	635.9	635.5	355.2
20500.0	480.6	-6.5	-9.6	78.2	626.4	630.9	355.5
21000.0	474.4	-7.2	-11.7	76.2	610.3	625.9	40.0
21500.0	466.3	-8.1	-15.4	55.7	600.7	634.7	16.4
22000.0	453.3	-9.1	-15.7	58.9	597.6	629.1	29.0
22500.0	444.5	-10.1	-16.0	62.0	587.7	625.3	34.1
23000.0	435.6	-10.9	-20.1	46.6	571.3	631.2	57.5

STATION ALTITUDE 3989.00 FEET MSL
 3 AUG. 01 130 HRS WDT
 ASCENSION I.O. 301

UHPIR AIR DATA

2150020501
 WHITE SANDS

GEODETIC COORDINATES,
 32.40043 LAT UEG
 106.37033 LON UEG

TABLE 10 CONT'

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT	REL.HUM. PERCENT	SPEED OF SOUND METER KNOTS	DIRECTION DEGREES(TTN)	WIND DATA	INDEX OF REFRACTION
23500.0	421.3	-11.5	34.3	566.5	030.4	45.0	4.9
24000.0	410.9	-11.6	31.5	557.6	030.2	59.2	3.5
24500.0	410.6	-12.3	33.0	548.0	029.4	62.5	3.2
25000.0	402.5	-13.6	29.5	539.7	027.9	62.4	3.0
25500.0	394.6	-14.9	21.2	58.8	026.7	23.9	2.8
26000.0	386.7	-16.0	21.1	64.6	026.4	23.9	2.5
26500.0	379.0	-17.0	21.9	65.3	523.2	32.7	2.3
27000.0	371.4	-17.9	22.8	514.7	623.9	551.4	4.9
27500.0	363.9	-18.6	25.8	65.6	506.4	022.7	6.0
28000.0	356.5	-19.4	28.9	52.7	497.6	621.8	12.7
28500.0	349.3	-20.4	30.5	42.4	489.1	620.8	23.8
29000.0	342.2	-21.4	30.5	39.8	481.2	619.5	9.6
29500.0	335.2	-22.6	32.1	37.2	473.3	610.3	12.2
30000.0	328.3	-23.9	33.2	36.9	465.8	616.4	13.2
30500.0	321.5	-25.3	34.0	38.6	458.7	615.1	13.9
31000.0	314.8	-26.6	34.8	40.3	451.6	613.5	12.9
31500.0	308.3	-27.9	36.4	42.1	444.7	611.8	11.7
32000.0	301.9	-28.6	38.4	43.8	437.9	610.1	10.4
				38.0	430.0	609.3	1.000097

STATION ALTITUDE 3989.00 FEET MSL
 3 AUG. 61 1300 HRS H.D.
 ASCENSIO: NO. 361

STATIONARY LEVELS
 2150020501
 WHITE SAILOR
 TABLE 11

GEODETIC COORDINATES
 32°40'04.3 LAT DEG
 106°37'03.3 LONG DEG

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE			WIND DATA
		AIR DEGREES	Dew Point CENTIGRADE	REL. HUM. PERCENT	
450.0	494.8	26.0	13.2	45.	188.8 5.5
600.0	668.9	21.4	11.6	54.	287.2 6.0
750.0	851.5	17.8	8.4	54.	345.2 7.8
700.0	1044.2	14.3	5.1	54.	359.9 8.5
650.0	1248.6	10.4	3.7	55.	340.5 7.7
600.0	1465.6	5.3	-1.6	61.	6.4 b.0
550.0	1696.7	-4	-2.4	86.	353.5 7.6
500.0	1945.3	-5.0	-8.1	79.	357.0 7.2
450.0	2215.2	-9.5	-15.8	60.	32.0 b.6
400.0	2511.6	-14.0	-24.5	41.	51.2 2.7
350.0	2840.1	-20.3	-30.3	40.	30.3 11.9
300.0	3208.2	-28.8	-39.1	30.	

STATION LEVEL 451.37 FEET MSL
3 AUG. 31
ASCE: 10, .0. 174

SIGNIFICANT LEVEL DATA

215010Z 174

LC-37

TABLE 12

PRESSURE MILLIBARS MSL FELT	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEPRES. OF GROES CENTIGRADE	REL.HUM. PERCENT
875.7	4051.4	31.1	46.0
850.0	4924.0	26.7	48.0
779.2	7422.9	20.0	62.0
730.2	9256.9	16.8	59.0
700.0	10438.7	15.2	56.0
654.2	12314.8	11.8	57.0
590.6	15099.1	5.2	59.0
571.0	15909.7	3.2	53.0
547.0	17141.9	-2.2	83.0
500.0	19492.1	-4.5	73.0
478.0	20655.1	-6.5	82.0
446.4	22407.8	-9.0	75.0
430.6	23324.9	-9.9	42.0
400.0	25187.6	-12.5	41.0
385.8	26093.4	-14.2	40.0
371.2	27054.3	-15.8	60.0
343.2	28988.1	-19.4	45.0
300.0	32238.2	-26.1	41.0

WEATHER COORDINATES
32.40175 LAT DEG
106.31232 LONG DEG

STATION ALITUDE 4051.37 FEET MSL
3 AUG. 81 1230 HRS MDT
ASCENSION NO. 174

UPPER AIR DATA
2150180174
LC-37

TABLE 13

GEOMETRIC ALTITUDE MSL FLEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DEPOINT DEGREES	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DIRECTION DEGREES (N)	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.4	875.7	18.1	46.0	993.7	0.820.6	0.0	0.0	1.000307
4500.0	802.9	28.8	16.4	978.7	0.790.8	216.0	.3	1.000298
5000.0	847.8	26.5	14.7	978.2	0.780.9	216.0	.6	1.000269
5500.0	835.1	25.2	14.4	965.7	0.750.4	216.0	.9	1.000285
6000.0	810.8	23.8	14.0	953.4	0.730.8	216.0	1.3	1.000281
6500.0	804.6	22.5	13.5	941.3	0.720.5	216.0	1.6	1.000277
7000.0	790.8	21.1	13.0	929.4	0.700.7	226.1	1.7	1.000273
7500.0	777.1	19.9	12.3	917.4	0.690.2	307.2	3.3	1.000268
8000.0	763.4	19.0	11.3	904.5	0.680.1	322.6	6.5	1.000261
8500.0	750.0	18.1	10.3	891.4	0.670.0	329.9	8.6	1.000255
9000.0	736.9	17.2	9.3	878.6	0.660.9	335.4	10.1	1.000248
9500.0	723.9	16.5	8.3	865.7	0.640.9	343.8	8.8	1.000242
10000.0	711.1	15.8	7.3	852.6	0.640.0	353.7	8.0	1.000237
10500.0	696.5	15.1	6.4	839.8	0.630.1	350.6	7.7	1.000231
11000.0	686.0	14.2	5.6	827.5	0.620.0	74.6	7.6	1.000226
11500.0	673.7	13.3	4.9	815.4	0.600.9	60.7	7.5	1.000222
12000.0	661.7	12.4	4.1	803.5	0.590.8	30.0	7.0	1.000217
12500.0	649.8	11.4	3.2	57.1	0.580.6	357.5	6.5	1.000212
13000.0	637.9	10.2	2.2	57.5	0.570.5	328.1	6.1	1.000208
13500.0	626.3	9.0	1.1	57.9	0.57.1	357.1	7.9	1.000197
14000.0	614.9	7.8	.1	58.2	0.560.7	359.2	5.9	1.000203
14500.0	603.7	6.6	-7.9	58.6	0.540.2	10.3	6.4	1.000199
15000.0	592.8	5.4	-1.9	58.9	0.520.4	40.0	6.9	1.000195
15500.0	581.8	4.2	-2.6	61.0	0.520.0	357.5	7.4	1.000190
16000.0	571.1	3.0	-3.1	64.5	0.490.9	11.0	7.9	1.000187
16500.0	560.4	1.6	-2.8	72.6	0.440.8	135.9	8.3	1.000184
17000.0	549.9	.2	-2.7	80.7	0.400.2	11.2	8.6	1.000183
17500.0	537.6	-9	-3.6	81.5	0.380.2	7.1	9.1	1.000181
18000.0	529.3	-1.8	-4.9	79.3	0.370.4	1.2	9.3	1.000177
18500.0	519.3	-2.7	-6.1	77.2	0.362.4	326.7	9.6	1.000173
19000.0	509.5	-3.6	-7.4	75.1	0.367.0	325.9	8.9	1.000169
19500.0	499.8	-4.5	-8.6	73.1	0.360.7	351.6	8.1	1.000165
20000.0	479.3	-5.4	-8.8	76.9	0.339.3	31.1	7.5	1.000161
20500.0	480.9	-6.2	-9.0	80.8	0.330.3	320.6	6.9	1.000158
21000.0	471.6	-7.0	-9.7	80.6	0.325.1	351.5	7.1	1.000156
21500.0	462.5	-7.7	-10.8	78.0	0.320.4	324.8	7.7	1.000153
22000.0	452.6	-8.4	-11.8	76.6	0.320.4	351.1	8.2	1.000149
22500.0	444.6	-9.1	-13.2	71.7	0.315.6	335.2	8.5	1.000146
23000.0	435.1	-9.6	-17.2	53.7	0.305.7	335.6	8.6	1.000142
23500.0	427.6	-10.1	-20.6	41.0	0.320.1	359.0	7.6	1.000137

OPTIC CONDITIONS
32.40175 LAT UG
106.31232 LON UG

STATION: ALTITUDE 4551.37 FEET MSL
 3 AUG. 11 1235 HHS MDT
 ASCENSION, 10. 174

UPPER AIR DATA
 2150160174
 LC-37

TABLE 13 CON'T

GEOPOTENTIAL ALTITUDE MSL FEET	PRESSURE IN MILLIBARS	TEMPERATURE AIR CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA DIRECTION DEGREES (TRUE) KNOTS	INDEX OF REFRACTION
24000.0	412.2	-10.8	-21.3	41.6	556.2	16.4
24500.0	411.0	-11.5	-22.0	41.4	546.8	29.0
25000.0	405.0	-12.2	-22.7	41.1	537.6	34.8
25500.0	395.0	-13.1	-23.6	40.7	528.7	54.1
26000.0	387.2	-14.0	-24.6	40.1	520.2	52.4
26500.0	377.6	-14.9	-25.3	48.5	511.5	626.4
27000.0	372.0	-15.7	-21.9	58.9	502.9	14.3
27500.0	364.6	-16.6	-23.2	56.5	494.6	624.3
28000.0	357.2	-17.6	-24.9	52.7	486.5	623.1
28500.0	350.1	-18.5	-26.6	48.8	478.5	621.9
29000.0	344.0	-19.4	-28.3	45.0	470.7	620.4
29500.0	336.0	-20.5	-29.4	44.4	462.9	619.5
30000.0	329.1	-21.5	-30.5	43.8	455.3	616.2
30500.0	322.4	-22.5	-31.6	43.1	447.9	616.9
31000.0	315.8	-23.5	-32.7	42.5	440.5	615.0
31500.0	309.3	-24.6	-33.8	41.9	433.3	614.3
32000.0	303.0	-25.6	-34.9	41.3	426.2	613.1

WEOL TEL COORDINATES
 32.40175 LAT DEG
 146.31232 LON DEG

STATION ALTITUDE 4051.57 FEET MSL
3 AUG. 61 1230 HRS MDI
AUTOMATO NO. 174

MATERIAL LEVELS

2150180114
LC-37GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 14

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE DEGREES	WIND DATA			
			AIR DEGREE CENTIGRAUT	DEGREE POINT CENTIGRAUT	WIND DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4920.	26.7	14.0	40.	216.0	6
800.0	6667.	22.0	13.3	50.	216.0	1.7
750.0	8496.	18.1	10.3	60.	329.9	6.6
700.0	10428.	15.2	6.5	50.	202	7.7
650.0	12479.	11.4	3.2	57.	357.7	6.5
600.0	14656.	6.2	-1.5	59.	5.4	7.0
550.0	16975.	2	-2.7	61.	7.1	9.1
500.0	19464.	-4.5	-8.6	73.	351.1	7.5
450.0	22168.	-8.7	-12.2	76.	353.1	6.6
400.0	25145.	-12.5	-23.0	41.	34.6	4.2
350.0	28454.	-18.5	-26.6	49.	23.1	7.8
300.0	32172.	-26.1	-35.4	41.		

STATION NUMBER 3889.00 FEET MSL
 3 AUG. 1953 1335 hrs PD
 ALTITUDE 11,000 ft

SIGNIFICANT LEVEL DATA

21500 ± 0.5
 WHITE SANDS

ATMOSPHERIC COORDINATES
 32.40943 LAT DEG
 106.37053 LONG DEG

TABLE 15

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE METERS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
677.7	5089.0	33.5	37.0
650.0	4936.5	29.6	42.0
7180.3	21.6	15.2	32.0
755.8	4202.7	18.9	11.2
700.0	16961.7	13.6	60.0
678.2	11337.7	12.7	50.1
660.8	12052.9	10.1	40.0
601.0	14625.1	4.8	20.0
592.4	15011.9	4.4	10.0
557.4	16160.6	.9	0.5
551.2	16925.6	-5.5	-20.0
543.2	17309.4	-2.3	-4.0
511.0	18902.6	-4.1	-8.4
500.0	19465.2	-6.7	-9.2
487.6	20109.2	-8.3	-10.5
472.2	20930.5	-7.7	-14.1
446.6	22347.7	-11.7	-14.4
442.2	22597.7	-11.3	-16.2
434.6	23636.7	-10.0	-20.4
400.0	25127.1	-13.9	-22.5
384.0	26142.2	-16.9	-23.0
341.8	28487.9	-22.6	-33.2
360.0	32102.8	-28.6	-38.0

STATION ALTITUDE 3449.70 FEET MSL
3 AUG. 1940 1300 HRS MDL
ASCAFFER 10. 303

W.P.R. AIR DATA
21500200.0
WHITE SANDS

STATION COORDINATES,
32.40043 LAT 06
106.37033 LONG 06

TABLE 16

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC MLITER	WEIGHT(S) IN KNOTS	DIR ELEVATION DEGREES	IND. DATA SPEED KNOTS	INST. OR REF. 110.
3989.0	971.7	35.5	37.0	988.9	0.000.0	70.0	7.0	1.000298
4000.0	971.4	35.5	37.0	988.6	0.000.0	70.0	7.0	1.000298
4500.0	862.7	31.4	16.0	39.7	978.9	602.6	70.9	6.3
5000.0	840.1	29.4	15.2	42.3	969.1	600.2	72.0	5.6
5500.0	833.6	27.6	14.4	44.5	958.4	678.1	73.4	4.9
6000.0	819.3	25.8	13.6	46.7	947.9	670.0	75.2	4.2
6500.0	805.3	24.0	12.6	49.0	937.5	675.9	77.9	3.5
7000.0	791.5	22.2	11.7	51.2	927.3	671.8	66.4	1.6
7500.0	777.8	20.3	11.3	54.5	915.9	670.1	62.2	2.1
8000.0	764.2	19.4	11.1	58.4	904.0	668.6	268.7	5.1
8500.0	750.8	18.2	10.2	59.5	892.1	667.1	299.4	7.8
9000.0	737.5	17.0	9.9	59.6	880.2	665.0	317.4	6.1
9500.0	724.5	15.9	7.5	57.7	868.5	664.1	336.5	6.5
10000.0	711.6	14.7	6.2	56.8	856.9	662.6	353.7	6.3
10500.0	699.0	13.6	5.0	56.2	845.3	661.2	7.0	6.7
11000.0	686.1	13.0	5.1	58.5	831.6	660.7	7.6	6.3
11500.0	674.2	12.1	4.6	60.0	819.4	659.6	6.7	6.0
12000.0	662.1	10.3	2.9	60.0	810.2	657.3	1.7	7.7
12500.0	650.0	9.2	2.0	60.5	798.7	655.9	39.5	7.4
13000.0	638.1	8.1	1.1	61.1	787.2	654.7	2.4	6.9
13500.0	626.5	7.1	0.3	61.7	775.7	653.4	4.7	6.9
14000.0	614.0	6.0	-0.6	62.3	764.5	652.2	5.9	7.5
14500.0	602.8	5.1	-1.4	62.9	753.4	650.9	6.9	6.2
15000.0	592.7	4.4	-1.6	64.0	741.3	650.2	5.9	1.000192
15500.0	581.6	2.9	-2.8	65.8	731.0	648.3	5.3	9.8
16000.0	570.5	1.4	-4.1	66.7	722.4	646.5	5.4	10.5
16500.0	560.2	0.3	-5.6	75.0	711.4	645.2	4.1	10.6
17000.0	549.6	-0.8	-3.0	85.2	703.3	645.9	2.3	10.3
17500.0	539.2	-2.5	-4.0	84.5	692.0	641.9	355.7	8.9
18000.0	529.0	-5.1	-5.0	79.9	680.5	641.1	344.7	7.3
18500.0	519.0	-3.6	-7.3	75.5	669.1	640.4	547.9	6.9
19000.0	509.1	-4.6	-8.5	73.7	653.7	639.2	539.0	6.6
19500.0	499.3	-6.8	-9.3	62.1	630.0	639.5	520.5	7.4
20000.0	489.7	-8.0	-10.3	63.7	642.4	635.0	545.4	6.1
20500.0	481.2	-8.9	-12.1	72.6	629.6	635.0	547.9	8.5
21000.0	471.9	-7.9	-14.1	61.0	617.4	635.0	549.0	6.9
21500.0	461.7	-9.3	-16.1	60.0	605.0	635.3	530.7	7.1
22000.0	452.7	-10.7	-14.3	75.1	603.0	631.0	545.4	5.6
22500.0	443.9	-11.5	-16.5	72.1	591.0	620.7	525.4	4.0
23000.0	435.2	-10.1	-20.0	44.1	575.0	632.2	51.3	2.9

STATION ALITUDE 3,890 FEET
3 AUG. 1953

UP, R AIR, DIA
21500200,0
WHITE SHADE

...LATITUDE
32°40'04.5 LAT LG
106.37033 LON LG

TABLE 16 CON'T

GEOPOTENTIAL	PRESSURE	TEMPERATURE	REL.HUM.	DENSITY	SWELL OF	IN UPWAV	INFLU
ALITUDE	AIR	DAMPING	PERCENT	GM/CUBIC	SOUND	DIRECTION	FRACTION
MSL FLEET	MILLIBARS	DECIBELS	CENTIGRADE	METER	KILO	DEGREES IN	OF
23500.0	420.7	-10.9	-20.9	43.3	560.1	631.3	318.3
24000.0	410.3	-11.6	-21.3	44.8	557.0	630.1	344.3
24500.0	410.1	-12.7	-21.8	46.2	548.0	629.0	39.2
25000.0	402.0	-13.7	-22.4	47.6	539.2	627.9	27.2
25500.0	394.8	-15.0	-22.6	52.0	531.3	624.2	23.5
26000.0	389.2	-16.5	-22.9	57.5	523.7	624.4	31.6
26500.0	379.4	-17.6	-24.2	56.2	515.5	625.0	35.1
27000.0	376.8	-18.6	-25.9	52.4	507.1	621.8	7.4
27500.0	362.3	-19.6	-27.7	48.5	490.8	620.5	7.9
28000.0	355.9	-20.6	-29.5	44.6	490.7	619.3	47.7
28500.0	346.7	-21.6	-31.3	40.8	482.7	610.6	9.6
29000.0	341.6	-22.6	-33.3	37.0	474.4	616.8	10.8
29500.0	334.5	-23.6	-34.1	37.2	466.8	615.6	12.1
30000.0	327.6	-24.5	-34.9	37.3	458.9	614.4	13.3
30500.0	320.8	-25.5	-35.7	37.5	451.2	613.2	13.2
31000.0	314.2	-26.5	-36.6	37.6	443.0	612.0	12.1
31500.0	307.7	-27.4	-37.4	37.8	436.1	610.8	10.0
32000.0	301.3	-28.4	-38.2	38.0	428.7	609.6	9.9
							1.000097

STATION ALTITUDE 3489.00 FEET ASL
 3 AUG. 61
 ASCENSION 10. 303

HAND COPY LETTERS
 2150n200.0
 WHITE SANDS
 32°40'04.3 LAT DEG
 106°37'03.3 LONG DEG

ATMOSPHERIC COORDINATES
 32°40'04.3 LAT DEG
 106°37'03.3 LONG DEG

TABLE 17

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE			WIND DATA	
		DEGREES	AIR DEGREES	DEGREE CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)
850.0	4933.	29.6	15.3	42.	71.8	30.7
800.0	6691.	23.3	12.3	50.	79.2	5.2
750.0	8524.	18.1	10.1	59.	299.8	7.9
700.0	10451.	13.6	5.0	56.	7.0	6.7
650.0	12490.	9.2	2.0	61.	359.5	7.4
600.0	14652.	4.8	-1.6	63.	5.9	6.4
550.0	16961.	2.8	-2.9	65.	2.4	10.3
500.0	19437.	-6.7	-9.2	62.	342.2	7.3
450.0	22122.	-11.2	-14.3	77.	345.5	5.1
400.0	25084.	-15.9	-22.5	48.	27.6	5.1
350.0	28561.	-21.4	-31.0	41.	53.3	10.6
300.0	32038.	-26.6	-38.4	36.		

STATION ALTITUDE 4051.37 FEET MSL
 3 AUG. 61
 1430 HRS STD_T
 ASPECTOR 140° 175

SIGNIFICANT LEVEL DATA
 2150100175
 LC-37
 TABLE 18

OUTLET COORDINATES
 32.40175 LAT DEG
 106.51232 LONG DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE.			RHUM. PERCENT
		Degrees	AIR DEGRDN	CENTIGRADE	
874.2	4051.4	33.2	16.5	37.0	
650.0	4880.3	29.7	14.7	40.0	
778.2	7439.5	22.5	12.4	53.0	
713.4	9999.8	15.5	9.0	65.0	
700.0	10428.8	14.6	7.4	62.0	
659.8	12065.1	11.0	4.5	64.0	
592.4	15445.1	3.2	-5.4	62.0	
574.2	15823.3	2.8	-4.0	61.0	
541.4	17380.8	-7.8	-15.0	75.0	
533.4	17771.7	-1.8	-6.9	68.0	
509.4	18971.3	-4.8	-7.7	80.0	
500.0	19453.7	-5.0	-9.4	71.0	
486.0	20167.2	-6.1	-13.0	55.0	
440.8	22689.3	-8.8	-22.3	32.0	
425.6	23570.0	-10.0	-22.2	36.0	
400.0	25145.2	-13.7	-25.8	35.0	
382.8	26239.9	-16.1	-27.7	36.0	
376.0	26683.9	-16.6	-24.6	49.0	
362.4	27592.4	-18.4	-31.0	32.0	
335.0	29452.3	-22.0	-33.3	35.0	

STATION ALTIMETER 4951.47 FEET MSL
1 AUG. 14 1430 HRS MDT
ASCENSIO. 40. 175

UPP, R ALK DUL
2150130175
LC-37

REFD. IN COORDINATES
32.40175 LAT DEG
106.31232 LONG DEG

TABLE 19

GEOMETRIC ALTITUDE METERS	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREESES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	DEPTH OF SOUND KILOMETERS	WIND DATA DIRECTION DEGREES WITH NORTH	WIND SPEED KNOTS	INDEX OF REFRACTION
4051.4	874.2	33.2	16.5	37.0	980.0	684.7	100.0	4.1
4500.1	861.0	31.3	15.5	38.6	977.5	682.4	100.8	3.2
5000.0	849.5	29.4	14.6	40.6	967.6	680.1	102.6	2.1
5500.0	832.0	28.0	14.3	43.1	955.5	678.7	107.7	1.1
6000.0	817.8	26.5	13.9	45.6	943.6	676.9	175.2	.2
6500.0	803.8	25.1	13.4	48.2	931.9	675.5	208.6	.7
7000.0	790.1	23.7	12.9	50.8	920.5	673.7	200.6	1.2
7500.0	770.5	22.3	12.4	53.3	909.1	672.0	238.3	1.7
8000.0	752.9	20.9	11.7	55.7	897.7	670.5	300.4	3.0
8500.0	749.6	19.5	11.1	58.2	886.4	668.7	305.3	4.3
9000.0	735.4	18.1	10.3	60.6	875.3	667.0	309.6	5.1
9500.0	723.6	16.6	9.6	63.0	864.4	665.3	314.0	5.6
10000.0	710.8	15.3	8.7	64.4	853.5	663.7	319.9	5.8
10500.0	696.2	14.4	7.3	62.1	841.1	662.5	328.4	5.6
11000.0	685.7	13.5	6.4	62.7	829.4	661.2	340.5	5.8
11500.0	675.4	12.2	5.5	63.3	817.8	659.6	353.0	6.4
12000.0	661.4	11.1	4.6	63.9	806.5	658.5	357.1	7.1
12500.0	649.3	10.0	3.5	63.7	795.2	657.1	357.7	7.8
13000.0	637.4	8.8	2.5	63.4	784.1	656.6	354.9	8.4
13500.0	625.8	7.7	1.1	63.2	775.1	654.2	355.7	9.0
14000.0	614.3	6.5	0.0	62.9	762.5	652.7	352.9	9.7
14500.0	603.1	5.4	-1.2	62.6	751.0	651.3	353.7	10.7
15000.0	592.0	4.2	-2.3	62.3	741.1	649.4	354.3	11.7
15500.0	581.2	3.1	-3.4	61.9	730.6	646.6	344.7	12.8
16000.0	570.4	2.4	-4.1	62.4	719.0	647.7	355.1	13.6
16500.0	555.7	1.2	-4.4	66.2	708.3	646.3	353.4	14.0
17000.0	549.2	.1	-4.7	70.1	698.2	644.9	354.4	13.7
17500.0	536.9	-1.1	-5.6	71.5	688.2	643.5	349.7	12.6
18000.0	525.7	-2.4	-7.0	70.3	678.5	641.9	344.7	11.3
18500.0	510.7	-3.6	-7.3	75.5	668.7	640.4	338.4	10.1
19000.0	500.8	-4.8	-7.4	78.5	658.9	639.0	333.7	10.3
19500.0	493.1	-5.1	-9.7	70.0	647.1	638.6	331.0	10.9
20000.0	487.5	-5.8	-12.5	59.1	636.5	637.5	330.5	11.8
20500.0	480.1	-6.4	-14.6	52.1	629.1	630.7	335.3	11.2
21000.0	479.8	-7.0	-16.2	47.5	615.4	630.0	339.7	10.3
21500.0	461.7	-7.5	-17.9	42.9	604.6	635.4	340.2	9.0
22000.0	452.8	-8.1	-16.7	58.3	594.0	634.0	339.7	7.8
22500.0	444.1	-8.6	-21.7	53.7	584.2	632.9	338.4	6.5
23000.0	435.4	-9.2	-22.3	23.4	574.3	630.2	341.9	6.5
23500.0	427.0	-9.9	-22.2	35.7	566.5	632.4	345.4	6.5

STATIC ALTITUDE 4051.37 FEET MSL
 3 AUG. 14 JN HRS MDT
 ASCESSION: .0. 175

LEPPIR AIR DATA
 2150180175
 LC-37

EODETIC COORDINATES
 32°40'175 LAT DEG
 106°31'232 LON DEG

TABLE 19 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPONT DEGREES	REL.HUM. PERCENT	DENSITY GH/CUBIC METER	SOUND NOISE	DIRECTION DEGREES (TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	415.6	-11.0	-23.2	35.7	555.1	031.0	347.8	5.6	1.000129
24500.0	416.4	-12.2	-24.3	35.4	547.4	029.6	357.6	4.4	1.000127
25000.0	402.3	-13.4	-25.5	35.1	539.1	028.1	349.9	3.4	1.000124
25500.0	394.3	-14.5	-26.4	35.3	530.7	026.8	65.9	4.8	1.000122
26000.0	386.5	-15.6	-27.3	35.8	522.4	025.4	75.9	7.3	1.000120
26500.0	378.8	-16.4	-25.9	43.6	513.6	024.5	77.1	7.9	1.000119
27000.0	371.2	-17.2	-26.7	43.1	504.9	023.4	77.0	7.9	1.000116
27500.0	363.8	-18.2	-30.2	33.7	496.8	022.2	72.8	7.3	1.000114
28000.0	356.4	-19.2	-31.4	32.7	488.7	021.0			1.000111
28500.0	349.2	-20.2	-32.1	33.5	480.6	019.8			1.000109
29000.0	342.1	-21.1	-32.7	34.3	472.6	018.6			1.000108

STATION ALTIMETER 4051.37 FEET MSL
3 AUG. 01 1430 HRS MDT
ASCENSION: 0. 175

MANDATORY LEVELS
215016017, 215016018
LC-37

EQUIPMENT COORDINATES
52°40'17.5 LAT DEG
106.31232 LONG DEG

TABLE 20

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	DEGREES CENTIGRADE	AIR TEMPERATURE DEGREES CENTIGRADE	W.L.HUM. PERCENT	WIND DATA WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS
450.0	4877.	29.7	14.7	40.	102.0	2.4
500.0	6640.	24.8	13.3	49.	273.4	0.8
750.0	8484.	19.5	11.1	58.	305.2	4.3
700.0	10418.	14.6	7.4	62.	327.0	5.7
650.0	12462.	10.1	3.5	64.	357.9	7.7
600.0	14630.	5.1	-1.5	62.	353.9	10.9
550.0	16943.	.2	-4.7	70.	354.3	13.8
500.0	19426.	-5.0	-9.4	71.	331.0	10.8
450.0	22128.	-8.2	-20.3	37.	339.3	7.4
400.0	25102.	-13.7	-25.8	35.	46.7	3.4
350.0	28392.	-20.0	-32.0	33.		

STATION ALTITUDE 3489.00 FEET MSL
3 AUG. 31 153n HRS MDT
A SIGHTING 10.0. 304

SIGNIFICANT LT. VIL JARA
215n02.0, 04
WHITE SANDS

TABLE 21

PRESSURE GEOMETRIC MILLIBARS MSL FEET	GEOMETRIC ALTITUDE DEGREES	TEMPERATURE AIR DEPTH CENTIGRADE	HUMIDITY PER CENT
876.0	3989.0	26.9	49.0
856.0	4637.3	28.2	45.0
850.0	4869.1	26.0	45.0
819.8	5951.2	25.2	47.0
762.8	7983.8	20.9	53.0
700.0	10397.1	13.0	71.0
690.0	10794.7	11.5	82.0
672.0	11521.8	10.5	77.0
654.4	12247.6	8.3	65.0
603.2	14447.7	3.9	71.0
586.0	15221.2	3.4	61.0
553.2	16749.8	-1	63.0
544.8	17153.3	.1	62.0
536.6	17551.6	-2.4	63.0
528.2	17963.7	-2.8	69.0
504.4	19162.7	-4.7	64.0
500.0	19389.3	-5.7	67.0
480.6	20408.4	-6.9	53.0
457.6	21666.8	-7.5	53.0
442.8	22505.4	-10.0	46.0
427.8	23379.4	-10.6	59.0
420.0	23818.6	-11.5	44.0
400.0	25070.0	-14.0	42.0
363.8	27416.0	-19.5	40.0
343.4	29822.3	-21.5	37.0
324.2	30210.7	-24.4	30.0
305.0	31665.0	-27.8	36.0
300.0	32054.8	-30.3	37.0

STATION COORDINATES
32°40'43" LAT DEG
106°37'33" LON DEG

STATION ALTITUDE 3,890.00 FEET ASL
3 AUG. 31 1530 HRS PDT

UPP. R AIR DATA
2150020.04
WHITE SAWDUST

REFLECTED COORDINATES
32°40'043 LAT DEG
106.37033 LONG DEG

TABLE 22

GEOPHYSICAL PRESSURE	TEMPERATURE	REL. HUM.	DENSITY	SPILL OF	WIND DATA	INFLUX
ALTITUDE	ATM. DEPOINT	PERCENT	GM/CUBIC METER	WIND DIRECTION	SPEED IN KNOTS	OF REFRACTION
'4SL FEET	DEGREES CENTIGRADE		KILONS	DEGREES (IN)	KNOTS	
3,989.0	37.0.0	28.9	17.1	49.0	1001.4	679.9
4,000.0	87.0.7	28.9	17.1	48.9	1001.5	679.9
4,500.0	360.8	28.3	15.6	45.8	986.9	679.1
5,000.0	840.2	25.9	13.1	45.2	979.0	678.0
5,500.0	831.7	25.5	13.1	46.2	965.3	675.6
6,000.0	817.4	25.1	13.0	47.1	946.1	672.1
6,500.0	803.3	24.0	12.5	48.6	935.2	673.9
7,000.0	789.4	23.0	12.0	50.1	922.4	672.7
7,500.0	775.8	21.9	11.5	51.6	909.8	671.4
8,000.0	762.4	20.8	11.0	53.1	897.5	670.2
8,500.0	743.9	19.2	10.5	56.9	880.7	669.3
9,000.0	730.7	17.6	9.9	60.6	870.0	660.3
9,500.0	722.7	15.9	9.2	64.3	865.0	664.4
10,000.0	710.0	14.3	9.5	68.0	855.3	662.5
10,500.0	697.4	12.6	8.1	73.8	845.2	660.6
11,000.0	684.9	11.2	8.0	80.6	834.0	658.9
11,500.0	672.5	10.5	5.7	87.2	821.3	656.0
12,000.0	660.4	9.1	6.2	82.3	810.7	653.2
12,500.0	645.3	7.8	5.2	83.4	799.7	654.7
13,000.0	635.4	6.8	3.6	80.2	783.2	655.4
13,500.0	624.7	5.8	2.1	77.0	770.9	652.1
14,000.0	613.3	4.8	.5	73.8	765.7	650.8
14,500.0	602.6	3.9	-1.0	70.3	754.4	649.6
15,000.0	590.9	3.5	-2.6	63.9	741.3	649.1
15,500.0	579.7	2.8	-3.9	61.4	730.0	648.1
16,000.0	569.1	1.6	-4.9	62.0	719.4	640.7
16,500.0	559.4	.5	-5.0	62.7	709.1	645.3
17,000.0	545.0	0	-6.3	62.4	697.0	644.7
17,500.0	537.7	-2.1	-8.2	62.9	689.4	645.2
18,000.0	527.5	-2.9	-7.4	63.8	678.2	641.3
18,500.0	518.4	-3.6	-8.9	56.8	667.3	640.3
19,000.0	509.6	-4.4	-10.1	64.7	656.6	639.3
19,500.0	497.9	-5.6	-11.2	65.5	647.5	637.6
20,000.0	485.3	-6.4	-13.2	58.6	636.6	636.6
20,500.0	470.9	-6.9	-14.9	53.0	622.7	630.1
21,000.0	460.6	-7.2	-15.1	53.0	614.7	630.3
21,500.0	450.6	-7.4	-15.3	53.0	602.9	630.3
22,000.0	441.7	-8.5	-17.0	50.6	593.7	634.2
22,500.0	431.0	-10.0	-18.4	49.0	582.0	632.3
23,000.0	431.2	-10.3	-18.6	49.0	574.9	632.4

STATION ALTITUDE 3,889.00 FEET MSL
3 AUG. 1953 1535 HRS MDT
ASCENSION, U.S.

WPP-R AIR DATA
2150020504
WHITE SANDS

TABLE 22

GEOMETRIC PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPD OF WIND KNOTS	WIND DATA DIRECTION DEGREES (IN) KNOTS	INDEX OF REFRACTION
23500.0	42.50.8	-10.9	-10.1	58.8	564.7	0.31.4
24000.0	41.7.4	-11.9	-21.7	43.7	556.0	0.30.0
24500.0	40.9.2	-12.9	-22.8	42.9	547.2	0.28.8
25000.0	40.1.1	-13.9	-23.9	42.1	538.5	0.27.6
25500.0	39.3.1	-15.0	-25.1	41.6	530.1	0.26.2
26000.0	38.5.2	-16.2	-26.3	41.2	521.9	0.24.7
26500.0	37.7.5	-17.4	-27.5	40.8	513.8	0.23.3
27000.0	37.0.0	-18.5	-28.6	40.4	505.9	0.21.8
27500.0	36.2.5	-19.6	-29.8	39.8	497.9	0.20.5
28000.0	35.5.2	-20.3	-30.7	38.6	489.2	0.19.6
28500.0	34.8.0	-21.0	-31.6	37.7	480.6	0.18.7
29000.0	34.0.9	-21.9	-32.8	36.1	472.4	0.17.7
29500.0	33.3.9	-22.9	-34.5	33.6	464.7	0.16.4
30000.0	32.7.0	-24.0	-36.2	31.1	457.1	0.15.1
30500.0	32.0.3	-25.1	-37.2	31.2	449.6	0.13.7
31000.0	31.3.6	-26.2	-37.6	33.3	442.4	0.12.2
31500.0	30.7.1	-27.4	-38.0	35.3	435.3	0.10.8
32000.0	30.0.7	-29.9	-39.9	36.9	430.6	0.07.6

STATION LATITUDE 39°9.00' N
3 AUG. 1951 1530 HRS NDT
AS ENSLISHED, 0.0. JUN

RANDATORY LEVELS
2150020004
WHITE SKIES
TABLE 23

"EODTIC COORDINATES
32°40'04.3 LAT DEG
106°37'03.3 LONG DEG

PRESURE	GEOPOTENTIAL	TEMPERATURE	AIR DE. POINT	REL. HUM.	WIND DATA
MILLIBARS	FEET	DEGREES CENIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS
1000.0	4866.	26.0	13.2	45.	234.2 6.5
1000.0	6616.	23.8	12.4	49.	146.6 4.6
750.0	8457.	19.3	10.5	57.	108.9 5.7
700.0	10387.	13.0	7.9	71.	39.9 5.8
550.0	12418.	7.9	5.4	64.	16.5 14.5
500.0	14573.	3.6	-1.3	69.	4.6 14.3
550.0	16831.	-0.0	-6.3	65.	2.2 11.9
500.0	19362.	-5.7	-10.6	67.	2.0 15.5
450.0	22061.	-8.8	-17.4	64.	46.5 5.1
400.0	25027.	-14.0	-24.1	42.	59.1 6.8
350.0	28367.	-20.8	-31.4	36.	70.5 7.1
300.0	31990.	-30.3	-40.2	37.	

